



23104647

**QP CODE: 23104647**

**Reg No** : .....

**Name** : .....

**B.Sc DEGREE (CBCS) REGULAR/IMPROVEMENT/REAPPEARANCE  
EXAMINATIONS, FEBRUARY 2023**

**First Semester**

B.Sc Food Science & Quality Control Model III

**Core Course - FS1CRT02 - BASIC FOOD CHEMISTRY**

2017 Admission Onwards

ED559AB5

Time: 3 Hours

Max. Marks : 80

**Part A**

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Define water holding capacity.
2. List the fat soluble vitamins.
3. Draw the straight and ring structure of glucose.
4. Illustrate the reason for staling of the bread.
5. Explain the reduction reactions of glucose and mannose with sodium amalgam.
6. Discuss on the classification of proteins according to shape.
7. Explain the ion binding capacity of protein.
8. Explain the role of enzymes in tenderisation of meat.
9. Define derived lipids with example.
10. Define polymorphism with example of butter fat.
11. Name the pigment present in tomato and anatto.
12. Discuss on anthocyanins.

(10×2=20)

**Part B**

*Answer any **six** questions.*

*Each question carries **5** marks.*





13. Explain the disaccharides sucrose maltose and lactose with structure.
14. Explain enzymatic browning and its method of control.
15. Explain the biological role of peptides.
16. Explain the ninhydrin reaction of aminoacids and its applications.
17. Explain the mechanism of enzyme activators.
18. Explain the reaction along with significance and method of saponification.
19. Discuss on reversion and the factors affecting it.
20. Explain about antioxidants and their mechanism of action.
21. Discuss on chlorophyll and myoglobin with its effect on processing.

(6×5=30)

### Part C

*Answer any **two** questions.*

*Each question carries **15** marks.*

22. Explain in detail about the classification of carbohydrates with examples.
23. Formulate the Michaeli's Menten equation for enzyme kinetics and explain the factors affecting it.
24. Describe the mechanism of competitive and non competitive inhibition in enzyme catalysed reaction with graphical representation.
25. Explain the technology of oil and fat processing.

(2×15=30)

